

composed of several parts fitted together and working in relation to each other, as, for instance, friction clutches, one jig may be made to serve for drilling all the individual parts, by the addition of a few extra parts applied to the jig when different details of the work are being drilled. In Figs. 16, 17, and 18, such a case is illustrated. The pieces *A*, *B*, and *C*, in Fig. 16, are component parts of a friction clutch, and the jig in which these parts are being drilled is shown in the same figure, to the left. Suppose now that the friction expansion ring *A* is to be drilled. The jig is bored out to fit the ring before it is split and when it is only

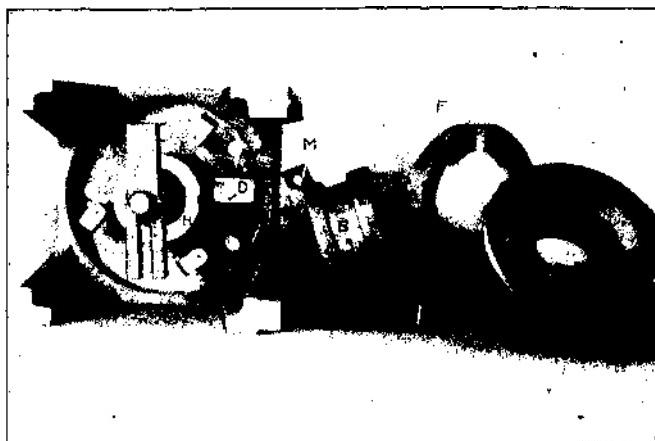


Fig. 16. Drill Jig for Parts of Friction Clutches shown at the Right

rough-turned, leaving a certain number of thousandths of an inch for finishing. The piece is located, as shown in Fig. 17, against the steel block *D* entering into the groove in the ring, and is then held by three hook-bolts, which simply are swung around when the ring is inserted or removed. The hook-bolts are tightened by nuts on the back side of the jig. Three holes marked *E* in Fig. 17 are drilled simultaneously in the multiple-spindle drill, and the fourth hole *F* (see Fig. 16) is drilled by turning the jig on the side. The steel block *D*, Fig. 17, is hardened, and has a hole to guide the drill when passing through into the other side of the slot in the ring. The block is held in place by two screws and two dowel pins,